



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,310	04/19/2004	Yong Sung Ham	8734.025 C1	9810
30827 7590 07/23/2007 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER LIANG, REGINA	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 07/23/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/826,310

Applicant(s)

HAM, YONG SUNG

Examiner

Regina Liang

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-8,15-18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8,15-18,20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/7/07 has been entered. Claims 1, 2, 5-8, 15-18, 20, 21 are pending in the application.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 2, 5-8, 15-18, 20 21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,788,280.

Art Unit: 2629

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are obvious over each other.

The following is an example for comparing claim 7 of this application and claim 4 of U.S. Patent No. 6,788,280.

Claim 7 of this application	claim 4 of U.S. Patent No. 6,788,280
An apparatus for driving a liquid crystal display, comprising:	An apparatus for driving, a liquid crystal display, comprising:
a modulator that receives and registers first source data for a first frame period, receives second source data for a second frame period subsequent to the first frame period, the second frame period having a predetermined duration, and that generates modulated data according to a comparison result between the registered first source data and the second source data;	a modulator modulating source data using registered data previously provided therein; and wherein the modulator selects the registered data through a comparison of entire bits of the current and delayed source data,
and a data provider alternatively applying the modulated data and data different from the modulated data to the liquid crystal panel during an output period having the predetermined duration within the one frame period.	a data provider alternatively applying the modulated data and data different from the modulated data to the liquid crystal panel within one frame period.

As can be seen above, the patent claim 4 differs from claim 7 of this application in that the data source not having a first source data and a second source data. However, the patent claims are in comprising format and therefore covers structure not specifically recited. The patent disclosure clearly describes the data source having a first source data and a second source data and are encompassed by the patent claims comprising format.

In view of the above analysis, applicant's claim 7 and patent claim 4 are not patentably distinct from one another and in the absence of a terminal disclaimer would result in an unjustifiable time wise extension of applicant patent.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 6-8, 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueno et al (US 6,320,562 hereinafter Ueno).

As to claim 1, Fig. 1 and 3 of Ueno discloses a method of driving a liquid crystal display (9), comprising: receiving and registering first source data for a first frame period; receiving second source data for a second frame period subsequent to the first frame period, the second frame period having a predetermined duration period (Fig. 3, display data S510 corresponds to

first source data, display data S401 corresponds to second source data, see col. 16, lines 25-31); generating modulated data (compensation data S501, Fig. 3) according to a comparison result between the registered first source data and the second source data; supplying the modulated data to a liquid crystal panel during an initial portion of an output period having the predetermined duration (see Fig. 5, Compensation processing period); and applying data different from the modulated data to the liquid crystal panel at a later portion of the output period than the initial portion (Predetermined horizontal scanning period).

As to claim 2, Ueno teaches the data applied to the LCD at the later portion of the output period is the source data (display data S401 is output to the display as a data signal S601, see col. 13, lines 40-43).

As to claim 6, Ueno teaches the first and second source data are not applied to the display while the modulated data are applied thereto (compensation data S501 is output to the display as a data signal S601, col. 13, lines 38-40).

As to claims 7, 18, note the discussion of claim 1 above. The selector circuit 6 in Fig. 1 of Ueno corresponds to the data provider alternatively applying the modulated data (compensation data S501) and data different from the modulated data (S401) to the display panel as claimed.

As to claim 8, Ueno teaches the data different from the modulated data is the second source data (S401).

As to claim 16, Fig. 1 of Ueno teaches a data driver (column drivers) applying the modulated data and the second source data received alternative from the data provider (selector

circuit 6) to the plurality of data lines on the display panel and a scanning driver (row drivers) applying a scanning pulse to the plurality of scanning lines of the display panel.

As to claim 17, Fig. 5 of Ueno shows the scanning pulse has a frequency as claimed.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 5, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno.

As to claim 5 and 20, Ueno does not disclose applying the modulated source data to the LCD panel for a first half frame period and the second source data to the LCD panel for a second half period. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ueno to apply the source data as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to claim 15, Ueno teaches the data provider alternatively applying the modulated data (compensation data S501) and second source data (S401) to the display panel. Ueno does not disclose the data provider includes a delay circuit. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the data provider of

Ueno to have a delay circuit for holding or delaying the second source data while the modulated data are applied to the display panel such that the second source data would be not lost.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno in view of Johnson (WO 99/05567).

As to claim 21, Figs. 1 and 3 of Ueno discloses a method of driving a LCD, comprising: applying a modulated data signal (compensation data S501) to a LCD panel (9) within one frame period; applying a data signal (S401) within the one frame period, wherein the modulated data signal is generated according to a comparison result between data from a frame period previous to the one frame period and data from the one frame period (see Fig. 3 and col. 16, lines 25-34). Ueno does not explicitly disclose the modulated data signal has a voltage level larger than that of the data signal. However, Fig. 7 of Johnson teaches a display device for generating a modulated data signal. Table I in page 6 of Johnson teaches the modulated data signal has a voltage level larger than that of the data signal. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ueno to have the modulated data signal which has a voltage level larger than that of the data signal as taught by Johnson so as to provide a high-speed driving method thereby rapidly reducing a response time of the liquid crystal (page 1, line 27 to page 2, line 1).

### ***Response to Arguments***

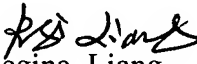
9. Applicant's arguments with respect to claims 1, 2, 5-8, 15-18, 20 and 21 have been considered but are moot in view of the new ground(s) of rejection.



10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Regina Liang  
Primary Examiner  
Art Unit 2674

7/18/07